

System configuration

■ Motion-specific units

| Product | Model | Description | Applicable overseas standard |
|--|----------------------------|--|---|
| Motion controller | Q170MCPUCPU | Integrated with power supply, PLC CPU, and motion CPU With battery (Q6BAT), built-in interface connector, 24 VDC power supply connector, and emergency stop input cable connector Control of up to 16 axes, operation of 0.44 ms or more, built-in interface for INC synchronous encoder: 1 channel, general input signal/mark detection input signal: 4 points, general output signal: 2 points | CE, UL |
| Emergency stop input cable ^{*1} | Q170DEMICAL05M | Emergency stop input -- order cables together with the motion controller. | 0.5 m |
| | Q170DEMICAL1M | | 1 m |
| | Q170DEMICAL3M | | 3 m |
| | Q170DEMICAL5M | | 5 m |
| | Q170DEMICAL10M | | 10 m |
| | Q170DEMICAL15M | | 15 m |
| | Q170DEMICAL20M | | 20 m |
| | Q170DEMICAL25M | | 25 m |
| Q170DEMICAL30M | 30 m | | |
| Connector for emergency stop input cable ^{*2} | Q170DEMICON | Connector for emergency stop input cable provided with Q170MCPUCPU | — |
| SSCNET III cable ^{*3} | MR-J3BUS□M | <ul style="list-style-type: none"> Q170MCPUCPU ↔ MR-J3(W)-□B MR-J3(W)-□B ↔ MR-J3(W)-□B | Standard cord for inside a panel: 0.15 m, 0.3 m, 0.5 m, 1 m, 3 m |
| | MR-J3BUS□M-A | | Standard cable for outside a panel: 5 m, 10 m, 20 m |
| | MR-J3BUS□M-B ^{*4} | | Long-distance cable: 30 m, 40 m, 50 m |
| External servo signal input unit | Q172DLX | External servo signal input for 8 axes (FLS, RLS, STOP, DOG/CHANGE × 8) | CE, UL |
| Manual pulse input unit | Q173DPX | Interface for manual pulse generator MR-HDP01/INC synchronous encoder × 3, 3 tracking input points | CE, UL |
| Built-in interface connector set | Q170MIOCON | Connector for INC synchronous encoder/mark detection signal interface connection provided with Q170MCPUCPU | — |
| 24 VDC power supply connector set ^{*2} | Q170MPWCON | 24 VDC power supply connector provided with Q170MCPUCPU | — |
| 24 VDC power cable | Q170MPWCBL2M | 24 VDC 2-meter power cable with crimp terminal R1.25-3.5 | — |
| | Q170MPWCBL2M-E | 24 VDC power cable with 2-meter EMI terminal with crimp terminal R1.25-3.5 Cable for disabling the emergency stop input on the front of the Q170MCPUCPU by short-circuiting the EMI terminal to the 24 VDC power supply | — |
| Battery | Q6BAT | For retaining SRAM memory data in motion controller -- programs, parameters, absolute position data, and latch data | Nominal current capacity: 1800 mAh |
| Large-capacity battery | Q7BAT | | Nominal current capacity: 5000 mAh |
| Large-capacity battery holder | Q170MBAT-SET | Battery holder for Q7BAT provided with Q7BAT | — |
| Manual pulse generator | MR-HDP01 | Pulse resolution: 25 PLS/rev -- 100 PLS/rev after magnification by 4 Allowable speed: 200 r/min in normal rotation Voltage output Allowable load Radial load: 19.6 N Thrust load: 9.8 N | — |

*1: Be sure to order the emergency stop input cable. Emergency stop cannot be canceled without this cable.

*2: Cable fabrication requires special tools. We do not supply special tools. Please obtain independently.

| | Manufacturer | Tools used |
|--|----------------------|---|
| Connector for emergency stop input cable | Molex | Crimping tool: 57026-5000 for UL1007 57027-5000 for UL1015 Removal tool: 57031-6000 |
| 24 VDC power connector | Tyco Electronics AMP | Removal tool: 1762846-1 |

*3: □ shows cable length. (015: 0.15 m, 03: 0.3 m, 05: 0.5 m, 1: 1 m, 2: 2 m, 3: 3 m, 5: 5 m, 10: 10 m, 20: 20 m, 30: 30 m, 40: 40 m, 50: 50 m)

*4: Check with Mitsubishi Electric regarding cables less than 30 m long.

■ Devices used in common with MELSEC Q Series PLC

| Product | Model | Description | Applicable overseas standard |
|-------------------------------|-------|--|------------------------------|
| Expansion base unit | Q52B | 2-I/O slot not requiring power supply | CE, UL |
| | Q55B | 5-I/O slot not requiring power supply | CE, UL |
| Expansion cable ^{*1} | QC□B | Length: 0.45 m, 0.6 m, 1.2 m, 3 m, 5 m, and 10 m | — |

*1: □ shows cable length. (05: 0.45 m, 06: 0.6 m, 12: 1.2 m, 30: 3 m, 50: 5 m, 100: 10 m)

Software

■ Motion OS software

| Usage | Model |
|----------------------------------|---------------|
| For transfer and assembly (SV13) | SW8DNC-SV13QG |
| For automatic equipment (SV22) | SW8DNC-SV22QF |

■ Engineering environment

| Product | Model | Applicable version |
|--|--|--|
| Motion controller engineering environment MELSOFT MT Works2 | SW1DNC-MTW2-E | Version 1.05F or newer Support main OS software (SV13 for transfer and assembly SV22 for automatic equipment) |
| | SW1DNC-MTW2-EAZ (Additional license: 1) | |

| Product | Model | Applicable version |
|--|---------------|-------------------------|
| PLC programming software GX Developer | SW8D5C-GPPW-E | Version 8.76E and after |

| Product | Model | Applicable version |
|---|-----------------|----------------------|
| Servo setup software MR Configurator | MRJW3-SETUP221E | Version C2 and after |